Conclusions

USEPA showed radioactive total radium in soil concentrations above those generally used by the USEPA Region 5 for Superfund cleanups, 5 picocuries per gram (pCi/g) over background for radium-226 + radium-228. With USEPA's background of 0.618 pCi/g, this criterion would be 5.618 pCi/g. The range of USEPA measurements was 5.82 – 7.26 pCi/g. The soil material is presumed to be flyash.

The PINES group was concerned that flyash with elevated radioactive soil concentrations might also be found in the Town of Pines. A gamma-ray count rate survey between October 10 and October 15, 2009 showed elevated readings in 15 locations. Background in 3 areas believed to be flyash free showed an average reading of 4722 counts per minute (cpm). Using a criterion of twice background (9444 cpm) as a point where more expansive investigation should begin, these 15 locations showed a range of readings up to 13,540 cpm.

Where readings were elevated, the area was usually covered with a black, glittery material with the appearance of finely ground obsidian. Surveyors called this material flyash. The health physicist operating the meter had seen similar material used for sandblasting.

Two other areas were found that seemed to indicate buried seams. If such seams were excavated gamma-ray count rates would probably rise. One further area showed “slag” type material that had a count rate distinct from the average background count rate.